

# Sports Facilities and Infrastructure: Do They Contribute to the Learning Interest of SMK Students?

Putri Ali Fahmy and Gatot Jariono<sup>(⊠)</sup>

Faculty of Teacher Training and Education, Muhammadiyah University of Surakarta, Surakarta, Indonesia

gj969@ums.ac.id

**Abstract.** The author's observations about the kids' enthusiasm in participating in physical education lessons for sports and health at SMK Muhammadiyah 2 Ngawi District, led to the problem in this study. Infrastructure given by schools for the continuation of teaching Sports and Health Physical Education at SMK Muhammadiyah 2 Ngawi is one of several determining elements. Students require the best facilities and infrastructure for physical education, sports, and health activities to attain the best learning results. Schools in particular bear a heavy burden in identifying issues before they arise in the real world. This study falls under the category of quantitative research because it uses a descriptive research design and presents its findings as the product of precise calculations. 60 students from SMK Muhammadiyah 2 Ngawi made up the study's sample, 30 of whom were in class X and 30 in class XI. The sampling method makes use of random sample methods and questionnaire-based data retrieval methods. By examining the data and then outlining the findings, this data analysis uses descriptive analysis to determine what information is required for further study. According to the study's findings, SMK Muhammadiah 2 Ngawi pupils in classes X and XI had "Enough" interest in the facilities and infrastructure used for physical education lessons.

**Keywords:** Facilities and Infrastructure · Interest in Learning · Physical Education

### 1 Introduction

In a learning environment, the interaction between students, teachers, and learning resources constitutes the process of learning [1]. Learning objectives, curriculum, teachers, students, techniques, materials, media, and evaluation are a few of the crucial elements that make up learning [2]. Physical education in sports and health aims to promote healthy lifestyles and the introduction of a clean environment through physical activity [3]. It also aims to develop aspects of physical fitness, movement skills, social skills, reasoning, emotional stability, moral actions, and moral actions through reasoning. Sports are the primary activity in physical education, which uses physical activity as the primary medium for learning objectives [4].

Physical activities can function well in educational institutions, especially schools if suitable infrastructure and learning facilities for physical education are provided [5]. Multiple factors internal and external affect whether the learning process for physical education is successful or unsuccessful [6–17]. The learning process can be facilitated internally by using teachers, physical education facilities, and infrastructure [18]. Family, environmental, and social variables are examples of external factors [19]. Infrastructure and learning environments for physical education are crucial components in determining the success of physical education learning [20]. So that the Physical Education learning process can follow the present curriculum, schools should provide learning infrastructure and facilities that are based on the number of pupils and can be used securely [21].

Technical knowledge, skills, attitudes, and work ethics are to be taught in vocational high schools (VCS) to prepare graduates to become skilled and professional workers. According to these achievement efforts, the process of creating a teaching system at VCS requires careful preparation and execution so that graduates may satisfy the community's present-day and long-term needs in their respective professions.

According to the observations that have been made, SMK 2 Muhammadiah Ngawi lacks the infrastructure and facilities necessary to support physical education learning activities. Examples include the lack of sports fields, unsuitable sports equipment, and a reliance on the schoolyard and nearby sports facilities. The infrastructure and facilities are still insufficient, which has affected how successfully physical education is being taught. Inadequate infrastructure and facilities are another issues, as evidenced by the worn-out footballs, lack of cones, and unavailability of sports fields. The school also pays little attention to maintenance and does not perform it regularly, which results in a lot of sports equipment that is not maintained and finally gets destroyed but is still used in physical education programs. The purpose of this study is to ascertain whether students at SMK Muhammadiah 2 Ngawi are interested in learning physical education using their facilities and infrastructure.

### 2 Method

#### 2.1 Research Methods

Because the research findings are presented as systematic computations, this study falls under the category of quantitative research [18]. One sort of study whose requirements are planned, structured, and methodical from the beginning to the creation of the research design is quantitative research methodologies. This study is descriptive [22]. Descriptive research is done to ascertain each variable's value and if one or more variables are independent without comparing or relating them to other variables [23].

# 2.2 Data Collection Techniques

The students who served as the study's subjects in 2022 were given questionnaires as part of the data collection technique. These official observations take place in the classroom during breaks and free time. It is observed whether students are interested in learning about the current sports infrastructure and amenities.

No	Interval	Category
1	M + 1.5 S < X	Very High
2	$M + 0.5 S < X \le M + 1.5 S$	High
3	$M - 0.5 S < X \le M + 0.5 S$	Enough
4	$M - 1.5 S < X \le M + 0.5 S$	Low
5	$< X \le M + 1.5 S$	Very Low

Table 1. Score Criteria Using Norm Reference Assessment

Information:

M: Nilai Rata-Rata Mean

X: Score

S: Standardization

## 2.3 Statistical Analysis Methods

The data analysis method used in this study processes numerical data with quantitative information. By examining the data and then outlining the findings, this data analysis uses descriptive analysis to determine what information is required for further study. Information gathered about kids' enthusiasm for physical education infrastructure and learning facilities. How to compute data analysis by applying the following formula to find the magnitude of the relative frequency of percentages:

$$P = \frac{F}{N}X100$$

Information:

Q: Percentage searched

F: Frequency

N: Number of respondents

Mean and Standard Deviation are used for categorization. States should use Table 1's Norm Reference Assessment (NRA) to calculate the scoring requirements.

#### 3 Results and Discussion

#### 3.1 Research Results

The findings of a study of data on class X and XI students' motivation in learning in 2022 regarding SMK Muhammadiyah 2 Ngawi's learning infrastructure for assessment (Table 2).

The lowest score result (min) was 34, the highest score (max) was 53, the average (mean) was 43.93, the middle value (median) was 43.00, the value that frequently appears (mode) is 43, and the standard deviation was 4,960. These statistical descriptive data were obtained from the results of this study regarding the interest of class X and XI students in 2022 in physical education learning facilities and infrastructure at SMK 2 Muhammadiah 2 Ngawi. The following information is displayed as a frequency distribution:

 Table 2. Descriptive Statistical Results of Students' Learning Interest in Facilities and Infrastructure

Statistics	Interest in Learning		
N	60		
Mean	43.93		
Median	43.00		
Mode	43		
Std. Deviation	4.960		
Minimum	34		
Maximum	53		
SUM	2636		

Table 3. Criteria for Students' Interest in Learning Classes X and XI towards Facilities and Infrastructure

No.	Interval	Category	Frequency	Percentage
1	51.37 < X	Very High	4	6,67%
2	$46.41 < X \le 51.37$	High	18	30%
3	$41.45 < X \le 46.41$	Enough	21	35%
4	$36.49 < X \le 41.45$	Low	13	21,66%
5	X ≤ 36.49	Very Low	4	6,67%
		60	100%	

Figure 1 depicts the learning interests of class X and XI students at SMK Muhammadiyah 2 Ngawi in 2022 toward facilities and infrastructure for physical education learning.

Based on Table 3 and Fig. 1, it is determined that class X and XI students at SMK Muhammadiah 2 Ngawi have a "Very High" level of interest in the facilities and infrastructure used during physical education lessons, with 6.67% (4 students), "High," 30% (18 students), "Enough," 35% (21 students), "Low," 21.66% (13 students), and "Very Low," 6.67%. (4 students). The class X and XI students of SMK Muhammadiah 2 Ngawi had "Enough" interest in the facilities and infrastructure for physical education sessions, according to the average score of 43.93.

According to the study's findings, there is enough student interest in sports infrastructure and facilities for learning sports-related physical education and health topics. This is supported by the findings of prior research, which generally classify the interest of students in sports education in sports facilities as satisfactory based on six indicators: basketball courts, tennis courts, volleyball courts, table tennis courts, futsal courts, and takraw courts are among those classified as satisfactory.

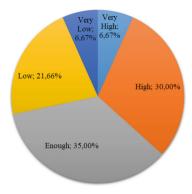


Fig. 1. Pie Diagram of Students' Interest in Learning about Facilities and Infrastructure

The learning facilities and infrastructure of the health assessment at SMA Negeri 10 Makassar are rated as moderate by Beny Badaru's research, which supports the study's findings. At SMA Negeri 10 Makassar, students had a moderate level of interest in learning about student health assessments [24]. Additionally, the findings of a study by Nur [25] focused on the connection between sports infrastructure and students' interest in the implementation of physical education lessons for health, recreation, and sports at SMA N 1 Batipuah, Tanah Datar District. The correlation coefficient's magnitude is 0.315, and its contribution is 9.9%. The infrastructure and facilities that facilitate the learning of SMPN 30 Makassar evaluations are categorized as ideal, according to research [8] The level of study interest among SMPN 30 Makassar pupils can be described as modest.

The findings of this study, which show that there is enough student interest in sports facilities and infrastructure for learning sports physical education and health categories, are supported by the findings of other studies. To boost students' enthusiasm for learning, particular attention must be paid to the infrastructure and learning facilities for physical education.

## 4 Conclusion

The results of this study can be concluded that the level of interest of class X and XI students in facilities and infrastructure in physical education lessons at SMK Muhammadiyah 2 Ngawi is in the "Enough" category or 35% (21 students). Based on the level of interest of class X and XI students in facilities and infrastructure in physical education lessons at SMK Muhammadiah 2 Ngawi is in the "Enough" category. However, the need for further research is related to students' interest in learning facilities and infrastructure for physical education, sports, and health as well as other factors that made contributions related to this research.

**Acknowledgments.** We thank Universitas Muhammadiyah Surakarta for sponsoring the study, granting permission for the research, and allowing us to participate in the International Conference of Learning on Advance Education 2022 with the theme "Learning Reform in Post-Pandemic Era." We also thank SMK Muhammadiah 2 Ngawi East Java for their assistance with the research and permission, as well as the research team, who took part and gave their entire time to this study.

**Authors' Contribution.** Contributions from authors include research assistance, conceptualization, technical assistance, formal article analysis, and compilation of original manuscripts-writing.

# References

- A. Wahid, "Pentingnya media pembelajaran dalam meningkatkanprestasi belajar," Istiqra', vol. V, no. 2, 2018.
- 2. M. W. Lidi, "Ragam Implementasi Materi Lokal Melalui Komponen-Komponen Pembelajaran Dalam Pembelajaran Sains," vol. 3, no. 1, pp. 10–19, 2019.
- G. Jariono and N. Subekti, "Sports Motivation Survey And Physical Activity Students Of Sport Education Teacher Training And Education Faculty FKIP Muhammadiyah University Surakarta," Kinestetik J. Ilm. Pendidik. Jasm., 2020, https://doi.org/10.33369/jk.v4i2.12449.
- J. Wulandari, Wulandari, Gatot, "Upaya Meningkatkan Kebugaran Jasmani Menggunakan Pembelajaran Kooperatif Tipe Jigsaw," J. Porkes, vol. 5, no. 1, pp. 245–259, 2022, https://doi.org/10.29408/porkes.v5i1.
- Arif Maulana Soleh and Waluyo, "Sarana Dan Prasarana Olahraga Mata Pelajaran PJOK Sekolah Menengah Pertama Negeri Se- Kota Salatiga," SPRINTER J. Ilmu Olahraga, vol. 2, no. 2, pp. 164–171, 2021, https://doi.org/10.46838/spr.v2i2.121.
- Depdiknas, "Undang-undang Republik Indonesia Nomor 20 Tahun 2003 tentang SISDIKNAS dan Peraturan Pemerintah RI Tahun 2015 tentang Standar Nasional Pendidikan dan Wajib Belajar," Citra Umbara, 2003.
- 7. Suyitno and F. B. Setiawan, "Penguatan Pendidikan Karakter melalui Permainan Tradisional di Sekolah Dasar Muhammadiyah Se-Kecamatan Depok," Edukasi J. Penelit. Artik. Pendidik., vol. 13, no. 01, pp. 13–22, 2021, [Online]. Available: http://journal.ummgl.ac.id/nju/index.php/edukasi
- 8. I. Sufadli, "Survei Sarana Prasarana Dan Minat Siswa Dalam Pembelajaran Pendidikan Jasmani Di Smpn 30 Makassar," J. Ilmu KeolahragaanFakultas Ilmu Keolahragaan, Univ. Negeri Makassar, vol. 20, no. 1, pp. 2–13, 2020.
- 9. A. Pacinongi and A. Asrifan, "Bimbingan Pengawas Berkelanjutan dalam Mewujudkan Pendidikan Karakter Bangsa dalam Kegiatan Belajar Mengajar Penjaskes," Celeb. Educ. Rev., vol. 2, no. 1, pp. 1–7, 2020, https://doi.org/10.37541/cer.v2i1.317.
- A. A. Pradana, "Strategi Pembentukan Karakter Siswa Pada Jenjang Pendidikan Dasar Melalui Mata Pelajaran Pendidikan Jasmani Olahraga Dan Kesehatan," Prem. J. Islam. Elem. Educ., vol. 3, no. 1, pp. 78–93, 2021, https://doi.org/10.51675/jp.v3i1.128.
- 11. S. Arifin, "Peran Guru Pendidikan Jasmani Dalam Pembentukan Pendidikan Karakter Peserta Didik," Multilater. J. Pendidik. Jasm. dan Olahraga, vol. 16, no. 1, 2017, https://doi.org/10.20527/multilateral.v16i1.3666.
- 12. S. Iwan, "Modifikasi Media Pembelajaran Pendidikan Jasmani Sekolah Dasar," J. UNIMED, vol. 14, pp. 35–41, 2015.
- 13. A. Paturusi, "Manajemen pendidikan jasmani dan olahraga," Jakarta: rineka cipta, 2012.
- R. Susiana, D. Pradana, and P. E. Juntara, "Transformasi Nilai melalui Pembelajaran Pendidikan Jasmani dalam Pembentukan Karakter Siswa Abad 21," Semin. Nas. Pendidik. Fak. Ilmu Pendidik., pp. 192–200, 2019.
- 15. Y. R. Natal, "Kebijakan pemerintah tentang penyediaan sarana dan prasarana olahraga pendidikan di SMP Negeri sekecamatan Bajawa," Ejurnal Imedtech-Instructional Media, Des. Technol. STKIP Citra Bakti Ngada, vol. 4, no. 1, pp. 22–36, 2020.
- 16. W. E. Widiyanto and E. P. P. Galuh, "Pendidikan jasmani adaptif di sekolah inklusif bagi anak berkebutuhan khusus," Sport Sci. Educ. J. Vol., vol. 2, no. 2, pp. 28–35, 2021.

- 17. E. J. Pratikto and A. N. Warthadi, "MINAT SISWA DALAM PEMBELAJARAN DARING MATA PELAJARAN PENDIDIKAN JASMANI OLAHRAGA DAN KESEHATAN SMA NEGERI DI BOYOLALI," J. Innov. Res. Knowl., vol. 1, no. 4, pp. 499–506, 2021.
- G. F. Friskawati and A. Sobarna, "Faktor Internal Pencapaian Hasil Belajar Pendidikan Jasmani pada Siswa SMK," J. Penelit. Pendidik., vol. 18, no. 3, pp. 327–335, 2019, https://doi.org/10.17509/jpp.v18i3.15004.
- M. Fatoni, G. Jariono, and C. Triadi, "The Trend And Interest In Sports Cycling During The Covid-19 Pandemic Pada Masa Pandemi Covid-19," vol. 20, no. 1, pp. 84–92, 2021.
- 20. S. Pamungkas, V. S. Sistiasih, and M. Or, "Survei Sarana Dan Prasarana Pendidikan Jasmani Di Sekolah Menenggah Kejuruan Sekecamatan Belitang Kabupaten Ogan Komering Ulu Timur." Universitas Muhammadiyah Surakarta, 2021.
- D. Y. Pratama, "Survei Sarana Prasarana Pendidikan Jasmani Olahraga Dan Kesehatan SD Negeri Se-Gugus 1 di Kecamatan Wonoayu Kabupaten Sidoarjo," J. Pendidik. Olahraga dan Kesehat., vol. 7, no. 3, 2019.
- 22. Sugiyono, "MetodePenelitian Kuantitatif, Kualitatif dan R&D. Bandung: PT Alfabet.," Sugiyono. (2017). MetodePenelitian Kuantitatif, Kualitatif dan R&D. Bandung: PT Alfabet. 2017.
- V. W. Sujarweni and L. R. Utami, "SPSS untuk Penelitian. Yogyakarta," J. Bisnis dan Ekon. (JBE), 2015.
- B. Badaru, "Analisis Peranan Sarana dan Prasarana Penjasorkes Terhadap Minat Belajar Penjasorkes di SMA Negeri 10 Makassar," J. ILARA, Ilmu Keolahragaan, Fak. Ilmu Keolahragaan, iv. Negeri Makassar, vol. 6, no. 1, pp. 63–72, 2015.
- 25. H. W. Nur, N. Nirwandi, and A. Asmi, "Hubungan Sarana Prasarana Olahraga Terhadap Minat Siswa Dalam Pelaksanaan Pembelajaran Pendidikan Jasmani Olahraga Dan Kesehatan Di Sma N 1 Batipuah Kabupaten Tanah Datar," J. MensSana, vol. 3, no. 2, p. 93, 2018, https://doi.org/10.24036/jm.v3i2.82.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (http://creativecommons.org/licenses/by-nc/4.0/), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

